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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,319	10/31/2001	Terrence Jones	10010587-1	3397

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AGILENT TECHNOLOGIES, INC.
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EXAMINER
KANG, INSUN

ART UNIT	PAPER NUMBER
2193	

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>24 August 2006</u>.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-25* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-25* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the amendment filed 8/24/2006.

2.   As per applicant's request, claims 1 and 14 have been amended and claims 24

and 25 have been added.   Claims 1-25 are pending in the application.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-13 and 24-25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Applicant's Admitted Prior Art (hereinafter referred to as "APA")

disclosed in the instant application in view of Harada et al. (US Patent 5,386,569)

hereinafter referred to as "Harada."

Per claim 1:

APA discloses:

-facilitating autonomous modification of a hardware state of a fixture system ("The

embedded controller allows the fixturing device ...to be operated autonomously...is

operable to respond to events...generated by changes in the hardware state...of the

fixturing device," APA, page 4 lines 6-21)

-a firmware of the fixture system monitoring hardware state changes of a fixturing

device of the fixture system ("The embedded controller allows the fixturing device

...to be operated autonomously...is operable to respond to events...generated by

changes in the hardware state...of the fixturing device," APA, page 4 lines 6-21)

APA discloses that in response to the firmware receiving hardware state

corresponding to states stored in the fixture device, the firmware autonomously

triggering execution of the external software in Fig 3. APA also discloses executing

high-level commands to change the state of the fixturing device (fig 2). However, APA

does not explicitly teach a programmable event stored in the fixture system and the

firmware autonomously triggering execution of a macro of one or more compiled

macros corresponding to the programmable event. However, it would have been

obvious to combine the systems in Fig 2 and 3 by placing the high-level control

commands in the controlling software in Fig 2 into Fig 3. Specifically, Harada teaches

that it was known in the pertinent art, at the time applicant's invention was made, to

provide autonomous operation and flexibility of upgrade (i.e. a macro program file

contains programs **stored in the PC (programmable controller)** which have been

written separately in advance...in a C language for achieving function instructions,

translated into the machine language by the compiler and stored in the memory as

existing programs, fig 10).). It would have been obvious for one having ordinary skill

in the art to modify APA's disclosed system to incorporate the teachings of Harada.

The modification would be obvious because one having ordinary skill in the art would

be motivated to easily operate and upgrade the fixturing device by storing macro

commands corresponding to a programmable event within the device as suggested by

Harada (fig 10).

APA in view of Harada further discloses firmware running the triggered macro

and executing one or more commands contained therein (i.e. "the fixture to trigger

the software," page 4)

Per claim 2:

The rejection of claim 1 is incorporated, and further, APA teaches:

-each of the one or more commands are interpreted sequentially (i.e. pages 2-4).

Per claim 3:

The rejection of claim 1 is incorporated, and further, APA in view of Harada teaches:

-the high level macro programming language may be determined by the fixturing system

(i.e. pages 2-4) as claimed.

Per claim 4:

The rejection of claim 1 is incorporated, and further, APA teaches:

-the one or more macros are compiled external to the fixturing device (i.e. pages 2-4).

Per claim 5:

The rejection of claim 1 is incorporated, and further, APA teaches:

- prior to the firmware interpreting the triggered macro, a triggered macro byte code is

transferred to a local memory of the fixturing device (i.e. pages 2-4).

Per claim 6:

The rejection of claim 1 is incorporated, and further, APA teaches:

- the macro is triggered by one or more internal events corresponding to one or more

hardware states of the fixturing device (i.e. pages 2-4).

Per claim 7:

The rejection of claim 6 is incorporated, and further, APA teaches:

- the one or more internal events are stored in a nonvolatile memory of the fixturing

device (i.e. pages 2-4)as claimed.

Per claim 8:

The rejection of claim 1 is incorporated, and further, APA teaches:

- the macro is triggered by one or more external commands transmitted by a control

software module (i.e. pages 2-4) as claimed.

Per claim 9:

The rejection of claim 8 is incorporated, and further, APA teaches:

- the control software module is a compiler for the one or more macros (i.e. pages 2-4)

as claimed.

Per claim 10:

The rejection of claim 1 is incorporated, and further, APA teaches:

- the one or more macros are compiled into byte code (i.e. pages 2-4) as claimed.

Per claim 11:

The rejection of claim 10 is incorporated, and further, APA teaches:

- the byte code is downloaded into a nonvolatile memory of the fixturing device (i.e.

pages 2-4) as claimed.

Per claim 12:

The rejection of claim 11 is incorporated, and further, APA teaches:

- one of a revision code is downloaded with the byte code, said revision code operable

to determine a version of one or more macros currently loaded within the fixturing

device (i.e. pages 2-4) as claimed.

Per claim 13:

The rejection of claim 12 is incorporated, and further, APA teaches:

-during a system initialization, further comprising: a control software comparing a first

macro revision with a second macro revision determined by a default macro file; and if

the first macro revision and the second macro revision are not equivalent, the control

software compiling and downloading the one or more macros from a file (i.e. pages 2-4)

as claimed.

Per claim 24:

The rejection of claim 1 is incorporated, and further, APA teaches:

Said one or more compiled macros are created using a high-level programming macro

language (APA, "high level commands," pages 2-4).

Per claim 25:

The rejection of claim 1 is incorporated, and further, APA in view of Harada teaches:

compiling one or more macros into a format recognizable by an interpreter

residing within a fixturing device; and transferring the one or more compiled macros

to the firmware residing within the fixturing device (page 2-4).

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 14-23 are rejected under 35 U.S.C. 102(b) as being anticipated by

Applicant's Admitted Prior Art (hereinafter referred to as "APA") disclosed in the instant

application.

Claim 14:

APA discloses:

-     a supervising automation software module, coupled to a control software module

        of a computer program product, said automation software module operable to

        initiate operation of the structure ("Often the design using an embedded

        controller...allows the fixturing device...to be operated autonomously," page 4

        lines 6-21)

        - a fixturing device, coupled to the control software module, e. pages 2-4).

-     said fixturing device further comprising ("an embedded controller...such as a

        programmable logic controller...embedded within fixturing device...to control

        fixture system," page 4 lines 6-21)

-     a firmware module, said firmware module operable to receive one or more

        stimuli, corresponding to one or more hardware state changes of said fixturing

device ("This type of fixturing device 220 has an embedded controller 230 with advanced firmware 240. The firmware 240 supports an extensive command set that includes high-level commands for normal operation. The test software 210 does not need to have intimate knowledge of the fixturing device 220 internal operation, although the fixturing device 220 does depend upon the controlling software 210 for basic operation. This is because the controlling software 210 polls the fixturing device 220 for changes in state, prior to executing commands to change the state of the fixturing device 220," page 4 lines 6-21)

- one or more local memory modules, coupled to the firmware module, said local memory modules operable to store one or more programmable events ("The embedded controller...is operable to respond to events...generated by changes in the hardware state...of the fixturing device," APA, page 4 lines 6-21, it is interpreted that the systems in Fig 2 and 3 are also "operable" to store one or more compiled macros and one or more programmable events)

- in response to the firmware module receiving the one or more stimuli that correspond to a programmable event of the one or more programmable events and the firmware autonomously triggering execution of a macro of one or more compiled macros corresponding to the programmable event that causes the one or more hardware states of the fixturing device to be changed ("The embedded controller...is operable to respond to events...generated by changes in the hardware state...of the fixturing device," APA, page 2-4) .

Per claim 15:

The rejection of claim 14 is incorporated, and further, APA teaches:

- the one or more stimuli are events receivable by the firmware module ("The embedded

controller...is operable to respond to events...generated by changes in the hardware

state...of the fixturing device," APA, page 4 lines 6-21).

Per claim 16:

The rejection of claim 14 is incorporated, and further, APA teaches:

-the one or more stimuli are commands receivable by the firmware module (APA, page

4 lines 6-21).

Per claim 17:

The rejection of claim 14 is incorporated, and further, APA teaches:

-the control software module is coupled to the fixturing device via an electronic

transmission cable (APA, page 4 lines 6-21) as claimed.

Per claim 18:

The rejection of claim 14 is incorporated, and further, APA teaches:

- one or more of the one or more local memory modules are nonvolatile (APA, page 4

lines 6-21) as claimed.

Per claim 19:

The rejection of claim 14 is incorporated, and further, APA teaches:

- the firmware module is operable to change the one or more hardware states in

response to the one or more stimuli (APA, pages 2-4) as claimed.

Per claim 20:

The rejection of claim 14 is incorporated, and further, APA teaches:

- the one or more compiled macros were previously compiled using the control software

module (APA, pages 2-4) as claimed.

Per claim 21:

The rejection of claim 14 is incorporated, and further, APA teaches:

- the one or more compiled macros are operable to be interpreted during an operational

mode of fixturing device (APA, pages 2-4) as claimed.

Per claim 22:

The rejection of claim 14 is incorporated, and further, APA teaches:

- the control software module sends one or more commands, receivable by the firmware

(APA, pages 2-4) as claimed.

Per claim 23:

The rejection of claim 22 is incorporated, and further, APA teaches:

-the firmware module, upon receiving the one or more commands, executes one or

more of the one or more compiled macros contained within the one or more local

memory modules (APA, pages 2-4) as claimed.

Response to Arguments

7.   Applicant's arguments with respect to claims 1-13 and 24-25 are moot in view of

the new ground(s) of rejection.

Applicant's arguments with respect to claim 14 have been fully considered but

they are not persuasive.

Per claim 14:

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. pre-stored programmable events) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The memory modules are operable to store programmable events according to the claim language used in the claim and do not recite the events and macro are actually pre-stored. If applicant means anything more, this must be brought out in the claims to further clarify the invention.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Insun Kang whose telephone number is 571-272-3724.

The examiner can normally be reached on M-R 6:30-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, MENG AI AN can be reached on 571-272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

I. Kang
Examiner
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